


# WELL DEVELOPMENTS



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## WELL LOG REPORTS

In the 1950s Well Logs were issued by drillers, from drilling notes, as a service to their customers prior to any requirement for licensing or reporting.

It was standard practice for well owners to provide the Well Logs to the Department of Health to facilitate filing a water right. In the early 1960s the Water Resources Board developed new forms for well owners and began filing the logs with the Applications for Water Rights.

The Water Use Act of 1973 required that Well Log Reports be filed by

the driller on a form provided by DNRC within 60 days after a well is completed.

The Well Logs are very helpful to the DNRC water rights offices in determining a water right by beneficial use of water. Even though the Well Logs are required to be filed within 60 days, there is no requirement that a Well Log is necessary for the well owner to make application for a water right.

DNRC has developed a software program for Water Well Log Reports that can be used with most computer systems. Information on the

software can be found by contacting Kim Overcast at 406 444-6835.

All drillers should be aware of changes made to the Water Well Log Report forms in 1997. In Section 3 of the form, a line was added for "Latitude" and Longitude" so that drillers who use a Global Positioning System (GPS) can enter that data instead of locating wells by section, township, and range. Computers used in processing the logs are able to use latitude and longitude, as well as location by section, township, and range.

Another change in the log form separates "Well Test Data" from "Pump Test Data." Section 9, Well Test Data, includes the minimum requirements for one hour of testing by bail, air or pump. Wells intended to yield over 100 gallons per minute must be tested for at least 8 hours.

Section 10, Pump Test Data, is not required to be filled out by well drillers, but is included because well owners or DNRC sometimes wish to have the driller or pump installer test the well by extensive pumping; therefore, the space is provided for that information.

## MONITORING WELL LOG REPORTS

For those of you who have questions about the filing of Monitoring Well Log Reports, please be advised that you must file the reports directly to BWWC. You can either adapt the current DNRC

form for water well filing to filing for the monitoring well, or if you are working with an engineer or hydrogeologist who uses a form that specifies the location, formations encountered, and method

of construction, you may use that form.

If you use the DNRC form, please be sure that you indicate that the well is a monitoring well, and send the form to BWWC

in Helena rather than to the DNRC Regional Office.

If you have any questions, contact the board office in Helena at 406 444-6634.

*Persons with disabilities who need an alternative, accessible format of this document should contact:*

DNRC, 48 North Last Chance Gulch, P.O. Box 201601, Helena, MT 59620 -- Phone: 444-6603/Fax: 406-444-0533/TDD: 406-444-6873

## LATE FILING OF WELL LOG REPORTS

Section 85-2-516, MCA, requires that all Well Log Reports be filed by the driller within 60 days after completion of any well. Board of Water Well Contractors Rule ARM 36.21.504 (1)(g) provides that disciplinary action may be taken against the licensee for failure to comply with Section 85-2-516.

The board office is still receiving reports from the DNRC Regional Offices that Well Log Reports are being filed after the 60-day deadline.

This problem has been discussed with some of the contractors, and the comment has been made that the contractor does

not consider the well completed until full payment has been received. Once a well has been physically completed, the Well Log Report must be filed with the proper DNRC Regional Office within 60 days.

Because, in some cases, the well owner is slow in supplying the legal description to the contractor, some allowances can be made. However, if this is the case, include a short note to that effect with the reports when you submit them to the regional offices.

Continued failure to file the reports promptly may result in action against the licensee.

## WELL SCREENS FOR GLACIAL CLAYS

Well screens have been routinely used in the industry since the early 1960s and are manufactured by several reputable firms. One product that came to our attention is a pre-packed screen made and distributed by Johnson Well Products.

This gravel-packed screen is capable of filtering micron-sized silts that cause dirty water problems in wells

from the glacial gravels of major aquifers in western and northern Montana.

The screen allows 3 gallons per minute of flow per foot of screen and is easily connected to a PVC liner. The company has received BWWC approval for continuing education credit for attending demonstrations of this product.

## VARIANCE

Since the inception of the BWWC Administrative Rules in 1987, it was recognized that the well construction standards could not meet every conceivable situation that may arise when drilling. Due to special circumstances beyond the control of the contractor, variances are necessary.

Rule 36.21.80 allows BWWC to grant a variance where, due to special circumstances or unusual conditions, the variance

accomplishes two things: (1) the variance will adequately protect the public, and (2) the variance will adequately protect the groundwater sources.

The rule requires that the request for variance be submitted in writing and acted on within 30 days. Most variances are handled in this manner. However, BWWC has followed a procedure of granting the variance by telephone with written backup. The board

found that circumstances may require an immediate variance to protect either the public or the groundwater resource, and 30 days' lead time to allow an inspection and a decision may not be desirable in some cases. For instance, Rule 36.21.671 requires that a flowing well be made

static before plugging. If a request for variance takes 30 days to process, the flowing well could be totally out of control before the variance is granted.



Photo by Bill Uthman

Further, contractors with equipment and labor could be unreasonably delayed pending a decision, so the board will grant an interim variance, by phone, and require written backup and logs.

In these circumstances BWWC recognizes that it could be an error to grant the variance prior to an inspection and it will reserve the right to order the driller to abandon the well permanently or reconstruct it.



## REQUIREMENTS FOR LICENSURE

The requirements for licensure are very similar in the three licenses — contractor, driller, and constructor. Each basically requires:

- 1) Apprenticeship for one year under a person licensed in Montana, or
- 2) Reciprocity from another state, or
- 3) Equivalent experience, education, or both.

Applicants for the contractor's and driller's licenses generally find that BWWC views their equivalent experience with skepticism and rarely grants qualification for equivalent experience. BWWC would rather err on the side of "Not Qualified" than have a licensed water

well contractor or driller who is unable or unwilling to comply with the rules.

BWWC takes a more liberal view of a monitoring well constructor's equivalent experience. Substantial experience, education, and references are still required, however.

BWWC also looks favorably on a driller's application when the applicant is currently employed as well as recommended by a licensed contractor. Rarely does the board waive the one-year apprenticeship requirement, however.

## HISTORICAL BOARD MINUTES

April 17, 1962

The Water Well Contractors Examining Board gave examinations for eight applicants who appeared before the board. Six applicants passed the examination:

C. T. Reid	Sheridan, Wyo
Harold Goodale	Beach, N. Dak.
Francis Boyce	Trotters, N. Dak.
William S. Love	Billings, Mont.
Malcolm Moran	Stanford, Mont.
H. Andrew	Idaho Falls, Idaho

Two individuals qualified for licensure under the "grandfather clause" and were licensed:

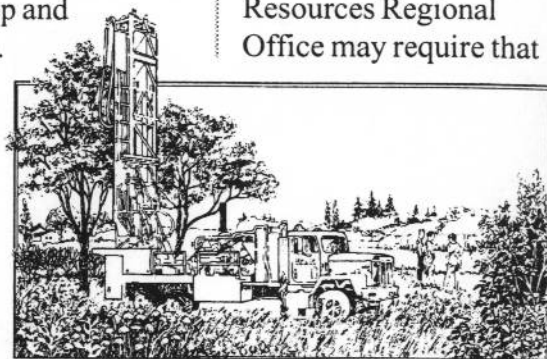
Robert McCracken	Billings, Mont.
Dan Harry Root	Miles City, Mont.

All future applicants will have to take the examination. A motion to adjourn was made by Mr. Brinck and seconded by Mr. Van Dyken. Meeting adjourned.

## GEOHERMAL SYSTEMS

Over the past 10 years geothermal heating and air conditioning using processed well water have evolved into two workable systems: closed-loop and open-loop.

The closed-loop system connects two or more



wells by special tubing which encases a liquid refrigerant that is pumped through the ground or groundwater and into heating or cooling units that extract the constant temperature air for use in a building. No water is extracted from or injected into the aquifer. The closed-loop system is not regulated by BWWC.

Open-loop systems circulate water extracted from a well or well field through the heating or cooling systems and then inject the processed water into another adjoining well or well field. BWWC requires that these wells be drilled by licensed persons according to the well construction rules.

BWWC has a responsibility to protect the

aquifers that may be involved in the extraction or injection of water used in open-loop systems. BWWC or the DNRC Water Resources Regional Office may require that

the driller provide soil and water samples for testing as well as additional well information to determine whether the open-loop system will adversely affect the aquifers.

Rule 26.21.650, Casing Perforations, prohibits interflow between aquifers if a deleterious effect can be shown; however, the rules do not specifically address open-loop systems or well fields. Nevertheless, BWWC may require that the wells be permanently abandoned if there is a documented threat to the aquifers involved. The board also recognizes that a licensed water well contractor who properly drilled the wells cannot be responsible for the use of the well system by the well owner.

## CONTINUING EDUCATION

The following Spring 1998 schedule of Montana Environmental Training Center (METC) classes has been approved for continuing education by the BWWC. Some classes may not involve actual water well drilling. However, they do involve small water systems, disinfection, and source protection, as well as pumps and municipal water systems, and may be of benefit to licensed persons. Specific information on these classes can be obtained by calling Jan or Barb at 406 454-2728.

April 8-9	Wolf Point	Multiple Topic Training
April 28	Bozeman	Compliance Management
April 29	Helena	Small Water Systems
April 29-30	Missoula	Small Water Systems
May 14	Polson	Chlorination
May 28	Red Lodge	Compliance Management
June 3-4	Lewistown	Multiple Topic Training
June 17-18	Hamilton	Small Water Systems
June 30	Bozeman	Disinfection

We have not received schedules by press time from  
Northwest Pipe (800 937-4737), Familian-Gould (800-873-1003)  
Mountain Supply (406 248-7701), Grundfos (800 677-6426)  
for the usual spring meetings.

Information will likely be available if you contact these suppliers directly.

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ADDRESS SERVICE REQUESTED

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